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ABSTRACT

The operation of a delivery system for mainstreamed children is discussed in terms of the concept of delivery of services, types of delivery systems, and the stages of special education services provision. Presented are two models which illustrate how criteria are beginning to be used in instructional decisions. The use of the instructional delivery model for reading instruction with an 8-year-old boy is explained. (SBH)

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DELIVERY SYSTEMS AND INSTRUCTIONAL DELIVERY: A NECESSARY DISTINCTION WHEN PROVIDING SERVICES FOR MAINSTREAMED CHILDREN

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DELIVERY SYSTEMS AND INSTRUCTIONAL DELIVERY: A NECESSARY DISTINCTION WHEN PROVIDING SERVICES FOR MAINSTREAMED CHILDREN

The concept of "Delivery of Services" for mainstreamed children has taken on many organizational forms, some of which are comprehensive and some of which are embryonic in nature. These forms began when school systems analyzed their particular needs, established structures for delivering needed services, and then set each delivery system in motion. Regardless of how elaborate or extensive each system may be, each operates on the basic premise of providing varing amounts of direct and indirect service to exceptional children.

It has been our observation, however, that the operation of a delivery system will not always assure instructional success. In fact, a common error is made within the profession whenever educators assume that once a delivery system is operational that "delivery of services" will be automatic. We say this because the concept of delivery of services is really threefold. To our way of thinking these three areas are:

The organizational and physical structure of services. It is here that a school system is concerned with making resources and personnel available to exceptional children via such physical structures as resource rooms, transitional classes, diagnostic/prescriptive centers, special educational cooperatives, etcetera.

The specific components and mechanics of service. These consist of such concerns as screening and identification, diagnosis, teaching, and evaluation of performance.

Instructional delivery. The focus here is upon the student's acquisition and use of concepts and materials and how teachers present them so that learning is a continuous and optimal experience.

On this basis, a delivery system functions as the readiness agent that avails personnel and sets in motion the mechanics so that instruction can be provided. Instructional delivery on the other hand is concerned with the actual daily arrangement and presentation of assignments to students. Appropriate prescriptions are of course a vital part of one's instruction, and as such represents part of the mechanics used within a delivery system. But teachers know that it is one thing to be able to prescribe appropriate instruction while quite another to be able to deliver one's prescriptions. Therefore, the mechanics of diagnosis and prescription represent part of the decision process of what methods and materials are to be used with particular students. They are not to be confused with the interrelated yet separate instructional delivery process of seeing that the materials are learned as quickly as possible once a particular diagnosis and prescription has been made.

In expanding upon these three areas we will be following this outline:

I Delivery Systems, Components, and Approaches.
(Realizing that personnel and mechanics are necessary, but not necessarily sufficient. Research evidence that delivery systems do not insure learning.)

II Using Criteria When Making Instructional Decisions.
(Lovitt & Hansen "Contingent Skipping and Drilling," and Gickling "Model for Instructional Delivery.")

III Research Results Using the Instructional Delivery Concept.
(Butt's study, and Gickling's studies)

IV Demonstration of the Use of the Instructional Delivery Model

V Discussion

Delivery Systems, Components, and Approaches

In order for students to learn they must be provided with personnel such as teachers, teacher-aides, physical therapists, etc. and with resources such as books, audio visual aids, etcetera. The kinds of resources and personnel privided to a child must be appropriate to the particular needs of the child. Some examples of delivery systems are:

1. The regular educational program with additional supportive services.
2. The regular educational program with the services of a special education consulting teacher who assists the regular teacher.
3. The regular educational program with additional instruction by a special education teacher in the regular classroom.
4. The regular educational program with a speech and language teacher providing services to a child.
5. The regular educational program with special education resource activities.
6. Regular or special education program combined with public or private supplementary services.
7. The comprehensive development class for full-time program.
8. Special day school.
9. Special residential facility.
10. Home and hospital instruction.

These systems are a means of providing personnel and materials to increase student learning. As the options increase so do the extent of personnel and materials. Such systems of delivering services to handicapped children are necessary to insure student learning. Students cannot learn without teachers, books, demonstrations, pictures, etcetera. Although such delivery systems are necessary they do not insure that students will, in fact, learn! Dunn's (1968) famous study demonstrated that simply because mildly retarded children received special programs, there was no guarantee

that student learning would increase. Thus delivery systems are necessary, but not sufficient in and of themselves, to insure learning.

In order to insure that the appropriate delivery system of special education service is provided, it is necessary to gather information on the student and to insure that he/she is receiving services according to local, state, and federal regulations.

The mechanics for preparing and servicing students for the special education services can be divided into the four stages which follow:

Pre-assessment activities. This could include obtaining parental permission, clarifying and confirming the referral problem, informing parents of their "due process" rights, and forming a multidisciplinary team.

Assessment activities. This could include observations, interviews, standardized and normative testing, diagnostic testing, and evaluation of work samples.

Placement. This would include selecting the most appropriate system for the delivery of special services and would include specifying the long and short term educational goals, the instructional procedures, and expected duration of services now required under Public Law 94-142.

Monitoring and follow-up. This would include record keeping, behavioral counts, criterion testing and pre and post testing.

Although these components contribute to the education of children, like the delivery systems, they do not insure that learning will necessarily take place. These factors are sometimes necessary and sometimes required by law. Being necessary does not mean they are also sufficient to insure the accomplishment of our educational objectives.

The third area of an educational program for special education children is that of an instructional delivery system—or system of providing instruction to children on a daily basis. At present, some of the more popular approaches to this area are the lecture method, discussion method, discovery method, individual prescribed instruction, and computer assisted instruction.

To date, the research on these methods for delivering instruction has shown none to be more clearly effective than another, and that none are superior to the traditional lecture method (Anderson and Faust, 1973). These methods of instructional delivery may vary widely in those components which research has shown to be related to learning (Becker, Engelman, and Thomas, 1975). For example, a teaching method may or may not contain procedures to secure student attention, give response directions, secure overt or covert responses, or offer feedback and reinforcement. In fact, an instructional delivery system may contain these essential features when taught by one teacher, but some or all of the features may be missing when taught by another teacher. Needless to say, these instructional strategies often lack a clear description of the essential components as well as a way of evaluating them. What seems to be lacking is a set of useful criteria to measuring instructional strategies and that could be used by classroom teachers.

Using Criteria When Making Instructional Decisions

Two models will be presented to illustrate how criteria is beginning to be used in instructional decisions. There may be other models developed to serve a similar purpose, if so we are not aware of them. We do present two models, however, to show the differences in approach. The first model represents a process of "Contingent Skipping and Drilling," by Lovitt and Hansen (1976).

CONTINGENT SKIPPING AND DRILLING

1. Read five 100 word segments at each of six grade levels.

2. Placed students in highest reader based on these criteria:
   A. Oral reading rate between 45-65 words per minute.
   B. Oral reading errors between 4-8 words per minute.
   C. Comprehension between 50-75 percent.

3. Skipping reading passages contingent upon 25 percent improvement.

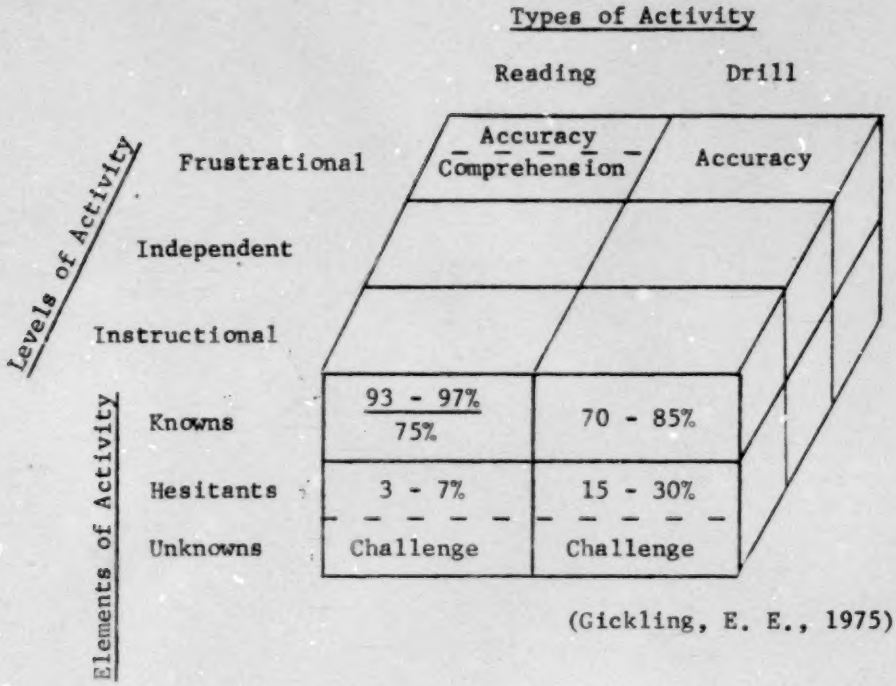
4. Drill on last 100 words in previous passage on aspect which did not reach criteria.

5. Proficiency levels:
   A. Oral reading 100 words per minute.
   B. Less than 2.5 errors per minute.
   C. 90 percent comprehension or better.

Regarding Lovitt and Hansen's work, we are not that familiar with the procedures to evaluate them. We do, however, commend them for providing criteria to make replication possible, and recommend their study as one possible source for making instructional decisions.

The second model is one that we have been working with at the University of Tennessee, and one which we will spend considerable time developing during this presentation. For want of a better description, we simple call it a "Delivery Model for Instruction." Its primary concern is to provide a structure whereby the degree of difficulty within assignments can be more systematically controlled. We realize of course that variables such as assignments which are too threatening, not interesting, not meeting immediate needs, too remote from life's experiences, or in disrepute with peer and family pressures (Gordon, 1966) may impede learning. These variables are best handled as part of teacher decisions. However, once a teacher decides upon what is best to teach, there is still the problem of teaching the information of choice. At this stage we believe as Ausubel (1963) has said, that the most crucial variable is that of the difficulty of materials and assignments. As the model attempts to show, the problem of difficulty can best be accounted for by controlling the ratio of known to challenging items (elements) in order to maintain each assignment at an instructional level for each student.

DELIVERY MODEL FOR INSTRUCTION



(Gickling, E. E., 1975)

Demonstration of the Use of the Instructional Delivery Model

Fortunately, most students function adaquately within classroom situations. Most seem to cope successfully when given only moderate teacher help inspite of differences in students' skills or the demands made by particular assignments. In fact, some students actually function independent of teacher help regardless of the difficulty of assigned work. For the struggling learner though, both interpersonal and curriculum problems pose a rather desperate situation. Not only do these students generally face embarrassment associated with being the bottom of their class, but they continue to face the frustration of being overwhelmed by daily curriculum demands.

Rick was one example of a student facing an uphill curriculum struggle. The following demographic information depicted his situation and gave some indication why this eight year old boy was unable to function at a level commensurate with his third grade classmates.

RICK

8 years 3 months
Visual acuity normal
Hearing acuity normal
WISC IQ:

Verbal	92
Performance	88
Full Scale	89

WRAT:

Reading	1.4
Functional Rdg Level	1.2

Prescription:
Jim Forest Reading Series—Book I

Instead of a third grade basal reader, the first book in the Jim Forest Reading Series was recommended. This book supposedly matched his general level of reading function. His initial reading performance on the first three paragraphs looked like this (All italicized words were unknowns and all underlined words were hesitant responses).

Rambeau, John & Nancy
Jim Forest and the Bandits

"There is a forest far up in the *mountains*. It is called Big *Pines*. *There* is a little *store there*. *There* is a *ranger* station *there* too. It is called Big *Pines Ranger* station.

Jim lives at the *ranger*station. He lives *with* his Uncle Don. Jim's uncle is a forest *ranger*. A *ranger's job* is a big one. He looks out for the forest. He looks out for all the things that live in Big *Pines*. One day Jim and the *ranger went* into the forest. *They* took *their horses*. *Star* is the *ranger's horse*. Big *Boy* is Jim's *horse*.

Jim and *Ranger* Don *were away* all *morning.* At *last they started back.* As *they came* down the *mountain*, Jim *said*, "Look! You can see the *ranger* station from *here.*" *Ranger* Don looked out *over* the trees. "Yes I can see it. I can see the *barn* too, *said Ranger* Don. *Then* the *ranger* looked *again.* "Did you *close* the *barn* door Jim?" "Oh yes, Uncle Don. You *said* to *close* it, and I *know* I did," Jim *said.*"

Obviously, what had been thought to be an effective match between Rick's reading ability and the first book in the Jim Forest Series had resulted in a frustrational reading situation. Even though a prescription had been made, a one-to-one correspondence had not been achieved between the skills of the child and the demands of the reading task. At this point it is not enough to say "the match was wrong," or "the match must meet the needs of the child." With a normal yet older child functioning at such a primary level it is almost impossible to find the "right" reading material.

In working with such a child we realize two things; first, that teaching materials which are chosen must complement what the teacher feels needs to be taught, and second, that the materials must be within the grasp of the child. In Rick's case we felt that the first condition was appropriate, and the Rick could profit from the Jim Forest Series. In order to provide the second condition, however, we had to be willing to modify the content of each succeeding paragraph to conform to the criteria of an instructional level, first through drill activity and then through reading content itself (See the criteria used within the Model for Instructional Delivery). Examples of the type of transitional paragraphs used to provide an instructional level specifically for Rick, as well as his accompanying responses, were:

Uncle Don

Uncle Don took Jim to the *mountain* . Uncle Don is a forest *ranger there.* He lives *on top* the *mountain.* He lives in the trees *on top* the *mountain.* He took Jim to look at all the trees in the forest. Jim looked up at all the big trees. He looked far into the forest at all the big trees.

Uncle Don took Jim to the Mountains.

Did Uncle Don live *on top* the *mountain*? yes.

He Took Jim to see the trees.

Is Uncle Don a forest *ranger*? yes.

Challenges
did
mountain
on
ranger
there
top
(77% known before Drill)

BIG *Pines*

There is a forest far up in the mountains. The forest is called Big *Pines*. There is a little *store* on top the mountain. A ranger lives on the mountain. He lives at a ranger station. The station is called Big *Pines* Ranger Station. Jim lives at the ranger station. Jim lives *with* his Uncle Don. Uncle Don is a forest ranger.

The forest is called Big Pines.

There is a little store on top the mountain.

The ranger lives at a station.

The ranger station is called Big Pines.

Jim lives *with* his uncle.

Challenges
called
little
Pines
station
store
with
(76% known before Drill)

Altogether, eight transitional stories were written and taught to Rick before efforts were made to have him actually read from the book. At this point the accumulative word pool had become sufficient to maintain him in the first few pages of the book. It was of continuing concern on his behalf to make certain that an appropriate instructional ratio was maintained for each succeeding page. The steady increase of his known words from page to page also helped to make it possible to keep him in the book once it was introduced. Once he began reading from the book, and began being exposed to the new words prior to seeing them in context, transitional stories were no longer needed. He had become able to successfully read within the book and eventually complete the reading of the book. We had "instructionally delivered" what we had set out to do!

(For a detailed description of the Model for Instructional Delivery, illustrations of its application, and associated research studies--contact either Dr. Edward Gickling or Dr. Donald Dickinson, University of Tennessee)

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